



# OSWER Innovations Pilot

## ***Improving Management of Household Prescription Medication Waste***

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*The Office of Solid Waste and Emergency Response (OSWER) initiated a series of innovative pilots to test new ideas and strategies for environmental and public health protection. The creative projects test approaches to waste minimization, energy recovery, recycling, land revitalization, and homeland security that may be replicated across various sectors, industries, communities, and regions. We hope these pilots will pave the way for programmatic and policy recommendations by demonstrating the environmental and economic benefits of creative, innovative approaches to the difficult environmental challenges we face today.*

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### **BACKGROUND**

Household prescription medication waste (HPW) has emerged as a significant environmental concern. Among the environmental concerns is water pollution from the disposal of prescription medication in the municipal solid waste (MSW) stream and in wastewater. Discarded prescription medication waste presents a threat in MSW because of its toxic and hazardous constituents, as well as its potential for becoming a source of medication for illegal use. Household hazardous waste (HHW) collections generally do not accept prescription medication. At present, there are no widely available solutions for proper management of HPW.

Pharmacies use bulk compounding chemicals in the formulation of prescriptions medications. These chemicals also present an MSW concern. Many bulk chemicals used are RCRA hazardous wastes and, due to the difficulty and expense of disposing of these small amounts of wastes, pharmacies may store them rather than manage them as hazardous waste. In addition, many prescription medications are dispensed in plastic containers that are ultimately disposed. Recycling only a portion of the millions of plastic prescription vials, stock bottles, and liquids bottles that are used by pharmacies each month would result in significant energy conservation and greenhouse gas savings.

### **PILOT APPROACH**

The Northeast Recycling Council, Inc. (NERC), in conjunction with EPA New England and eleven other public and private cooperative partners, plans to develop and implement pilot collection programs for HPW and bulk compounding chemicals. Pilot activities will include writing a guidance document detailing collection methods for these hazardous wastes and developing best management practices (BMPs) for plastic medication associated containers.

After developing a strategy for addressing the relevant federal laws governing prescription medication handling and patient confidentiality, pilot projects will be designed around three models: retail-based, senior center, and HHW programs. Implementation will include arranging for safe handling and disposal of HPW, publicizing and managing the pilot projects, and data collection. The projects will be evaluated for solid waste diversion data, participant demographics, costs, lessons learned, and recommendations for change or replication. For bulk compounding chemicals, the strategy will be to partner HHW programs with pharmacies. Between three and five pilot projects will be developed. Finally, NERC will gather and examine data relating to plastic medication-associated containers and regional recycling markets, and develop BMPs for recycling or disposing of these containers in an environmentally friendly manner.

## **INNOVATION**

Appropriate end-of-life management of HPW through collection programs has proven to be challenging and often impossible. The complex issues related to environmental and human health, federal and state controlled substances, privacy, hazardous and solid waste laws, as well as concerns about the diversion of medications to illicit uses, are among the challenges. This pilot is unique in that it will draw together a multi-disciplinary team of experts actively engaged in these issues. There is no history of pharmacies using HHW programs or for handling plastic medication containers at the end-of-life, including recycling, waste-to-energy incineration, and hazardous waste incineration. This project will address these questions.

## **BENEFITS**

This pilot will forge critical relationships between a multi-stakeholder community on complex solid waste issues related to HPW and expand the national dialogue on this topic. The pilot also will develop practical strategies for collecting HPW and ensuring their proper end-of-life management. As a result, the problems associated with diversion to illicit use, illegal and unsafe disposal, environmental contamination, and public health and safety concerns will be addressed through a strategy that can be replicated nationwide. The pilot will increase public awareness about the dangers presented by improper management of HPW while providing a model strategy for cost-effectively diverting hazardous chemicals from MSW to HHW programs. This will result in a more controlled management system and will improve efforts by the retail and local sectors to promote environmental stewardship.

## **CONTACTS**

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For additional information, visit the EPA OSWER Innovations web site at: [www.epa.gov/oswer/iwg](http://www.epa.gov/oswer/iwg).